

**ELECTRO-OPTICAL SENSOR SYSTEM** 

#ElectroOptics



HIGH DEFINITION (1280x1024) HD THERMAL CAMERA
LASER RANGE FINDER AND TARGET DESIGNATOR
LASER SPOT TRACKER
INTERNAL BORESIGHT SYSTEM (IBS)
HIGH PRECISION 2 AXIS MECHANICAL + 2 AXIS OPTICAL STABILIZATION
SINGLE/MULTI TARGET TRACKING
AUTOMATIC TARGET RECOGNITION (ATR)
OPERATION IN VERY LOW TEMPERATURES & HIGH ALTITUDES



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# **ELECTRO-OPTICAL SENSOR SYSTEM**

TOYGUN is an Electro-Optical Imaging and Targeting solution for the aircrafts where Radar Cross Section (RCS) and Aerodynamic Drag Coefficient are critical. The system can offer targeting solutions for both Air to Air and Air to Ground Missions. Integrated to aircraft fuselage, the system is protected from external influences by the faceted optical window specifically designed for the platform. The system provides various functions together with high performance for different platforms under the most challenging conditions.

# **Applications**

- Targeting
- Reconnaissance and Surveillance
- Single and Multi-Target Tracking
- Automatic Target Tracking
- Search & Wide Area Scan
- Infrared Search and Track (IRST)

### **Main Features**

- Common Aperture Technology for "Thermal (MWIR) Imaging" and "Laser Designation and Range Finder" Channels
- Platform-Embedded Electro-Optical Structure
- Faceted Design for Low Radar Cross Section (RCS)
- Single/Multi Target Tracking
- Laser Spot Tracker
- Internal Boresight Capability
- Image Processing with Artificial Intelligence Algorithms
- Infrared Search and Track (IRST) Mission
- High Definition HD IR Camera (MWIR)
- Laser Range Finder and Designator (LRFD)
- 2 Axis Mechanical + 2 Axis Optical Stabilization
- Automatic Target Recognation (ATR)
- Inertial Measurement Unit (IMU)
- Line of Sight Control
- Navigation and Target Estimation
- Liquid Cooling

# **Technical Specifications**

### **HD IR Camera**

• Sensor Resolution : 1280x1024, 15 μm

Wavelength : MWIR

## Field of Regard (FOR)

Azimuth : 360° continuous
 Elevation : -90° to +10°\*
 (\*Depends on the A/C Integration)

## Laser Range Finder and Target Designator

Wavelength : 1570 nm (Training) & 1064 nm (Combat)

: RS-422, MIL-STD-1553B

Range : Up to 35 km
Coding : NATO STANAG 3733

#### Power Interface

MIL-STD-704F Compatible

**Communication Interface** 

Sensor Suit : 270 VDC
Optional Electronic Unit : 28 VDC

Power Consumption : <1000 Watt

(Maximum Average Power Consumption)

# Size (w/o Faceted Window)

 Width
 : ≤ 510mm

 Height
 : ≤ 700 mm

 Depth
 : ≤ 660 mm

## Weight

TOYGUN Sensor Suit :≤118 kg
Optional Electronic Unit :≤25 kg

(The weight of the faceted window will depend on the final design.)

## Temperature

Operation : -40°C to +70°C
 Storage : -55°C to +70°C





